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Gwent Recorders' Forum

Theme: Woodlands

Saturday 29th January 2011

Greenmeadow Community Farm, Cwmbran

The Chairman, Martin Anthoney, welcomed everybody to the eleventh annual Gwent Recorders' Forum. Thanks were given to SEWBReC for arranging the event.

Lady Park Wood
George Peterken

Lady Park Wood lies on a steep limestone slope in the Wye Valley, on the boundaries of Monmouthshire, Herefordshire and Gloucestershire. It is largely comprised of ancient semi-natural woodland and includes dense woodland stands as well as coppice with standards. Lady Park Wood was selected as an ecological reserve for research in 1944, and has been the focus of studies of natural woodland since 1945. It is now designated a National Nature Reserve. George Peterken's involvement with the woodland began in the mid-1970s.

Lady Park Wood contains much large-leaved lime, scarce elsewhere in Britain, amongst small-leaved lime and beech, plus other native species. Parts of the wood were coppiced in 1870 and thinned in 1902 and during the1920s, but no management has taken place since, resulting in a close to natural woodland state. These areas, known as "old growth", contain 80, 105 and 140 year old trees, plus standards of up to 210 years old. The "new growth" area was managed as the "old growth" until it was coppiced between 1942 and 1944. It still has the appearance of coppiced woodland.

The first studies of Lady Park Wood were undertaken by Eustace Jones, who was involved in the original designation of the wood as an ecological reserve. Jones set up 6 transects running from the top of the reserve to the edge of the cliff in 1945, with 3 additional transects being put in place later, running across the stand below the cliff. This structured approach has led to around 10% of the trees in Lady Park Wood to be recorded individually. By the mid-1970s, Jones' interests lay elsewhere and there was danger of research halting. In 1977, following the drought in 1976 (a key event in the history of the woodland), Alan Orange (then a schoolboy in Coleford), was enlisted to record the woodland's structure. The result was extremely detailed, accurate records of the woodland, including tree position and species, down to the number of coppiced stems. Further very fine records were made in 1984 by Tom Barfield.

Instances of disturbance in the woodland have also been recorded – both environmental and human influenced, such as slope instability, drought, wind throw, snowfall, bank voles, felling, fallow deer, grey squirrel and Dutch elm disease. Regular measurement and observation of individual trees in the woodland has enabled the biographies of around 20,000 trees to be put together, including the earlier life of now dead trees. The existence of such long-term records of what actually happened, rather than needing to hypothesize, is extremely valuable. Trees become more vulnerable as they get older, therefore various disturbance factors are more important as the wood becomes more

natural. George Peterken has plotted the structural effects of these factors and the subsequent widening of canopy woods.

Long-term studies of the ground flora have also taken place. Quadrats initially employed by a PhD student in 1979 were permanently marked in 1985, and studied again in 2009. These confirmed a huge decline in woodland ground flora diversity. The same effect within a large enclosure in the woodland from which fallow deer are excluded has revealed that whilst the grazing of deer does has an effect, it is not the sole cause, and shade, litter build up, nitrogen rain and attenuated seed bank also play a part.

The advantages of such long-term study having taken place in Lady Park Wood are numerous. It has enabled natural woodland functions to be studied, plus the natural ecology of native tree and shrub species. Comparisons can be made with managed wood and it can be used to demonstrate near to nature woodland structure. There is also the potential for other valuable studies on the woodland's ecology and wildlife.

Dr Peterken concluded his fascinating talk by highlighting the intrinsic problems of long-term studies, including loss of interest, change of purpose, studies outlasting institutions/careers and the impossibilities of securing long-term funding meaning continuous studies to, e.g. 2050, cannot be made. Alongside data survival being crucial, it is also vital that institutional memory is there – if it is not known that the site, knowledge and the record are available, they will be lost.

Lady Park Wood is much studied, and published articles can be found in many journals, amongst the most accessible being in British Wildlife from 1995 (issue 6, pages 205-13) and 2005 (issue 13, pages 7-16).

Managing Local Woodlands for Local Lepidoptera
Clare Williams (Butterfly Conservation Wales)

Clare began by reporting an outcome of a 2010 Butterfly Conservation conference that many woodlands were in crisis. Woodland is an important habitat for Lepidoptera, with key features including:

- Structural complexity
- Habitat diversity
- Food plant diversity
- Connectivity
- Management cycles
- Landscape approach

Whilst shade tolerant butterfly species, such as white admiral, and generalists, such as speckled wood, are doing reasonably well, open woodland specialists, including pearl bordered fritillary, and other species for whom woodland rides and glades are important, such as dinghy skipper, are in decline. They need woodland disturbance / management. Studies have revealed a decrease by over 50% in butterfly population abundances. The same long-term study data does not exist for moths, but they are also reportedly in decline.

Butterfly Conservation (BC) is starting to work closely with Forestry Commission (FC), as they are able to help deliver management on the ground.

Drab looper is a UKBAP species of which all the known populations in Wales lie within Monmouthshire. Sites include 2 FC owned woodlands, Slade Wood and Hendre Wood, plus Ministry of Defence land at Caerwent. This moth is most often associated with large stands of its larval food plant, wood spurge, which follows clearance, coppicing or other disturbance. As drab looper is a weak flier, another habitat requirement is large sheltered areas. Hendre Wood appears to be a particular stronghold for the species, although recording has shown that its distribution

appears to be more restricted than in the past. Whilst suitable habitat is present, it is currently in isolated patches, rather than forming a network in the wood. Although larger-scale management is usually preferred, in order to ensure the persistence of the species at this site, micro-management is currently taking place, with volunteers moving in to clear species such as bramble once clearance by contractors has occurred.

In order to promote the idea of BC and FC working together and bring it to the attention of more staff, a newsletter is soon to be produced. It is hoped that this increased awareness of potential issues will lead to more sensitive management as well as providing points of contact.

'Sudden Oak Death' – *Phytophthora ramorum*

Kevin Izzard (Food and Environment Research Agency – FERA)

There are two *Phytophthora* species which pose a risk to woodlands: *P. ramorum* and *P. kernoviae*. The former of these species was first identified in the mid-1990s in the USA, where it was causing the widespread destruction of oak trees (leading to the name 'Sudden Oak Death'). It was first detected in the UK in 2002. During the course of surveys for *P. ramorum*, *P. kernoviae* was discovered in Cornwall in 2003, where it was severely affecting beech trees and rhododendrons. In December 2007, *P. kernoviae* was confirmed on *Vaccinium myrtillus* at a woodland site in Cornwall and in February 2008 in open heathland. January 2009 saw the first detection in the wild of *P. ramorum* on *V. myrtilus*; in August 2009 the species was identified on Japanese larch trees. By February 2010, *P. kernoviae* had been found in a range of other tree and shrub hosts. Due to the discovery of this range of host species, the name 'Sudden Oak Death' is no longer used as it is misleading. 90% of the *Phytophthera* infection in the UK is actually found on *Rhododendron ponticum* and larch.

The Policy Review Outcome in 2008 saw the decision made to do more than the EC minimum to try to halt the spread of the pathogens. A control programme was put in place, and the Government agreed a budget of £25 million over 5 years. The *Phytophthora* Team was put together to undertake research; this has now taken on a new dimension due to the discovery of the variety of host species (of which there may still be more to be found). The situation is particularly complex as not only are there many hosts, there are at least two diseases, and endless ways in which they can be spread. The characteristics of the different stages in the *Phytophthora* life cycle mean it is particularly well able to persist: whilst *P. ramorum* sporangia are susceptible to conditions such as cold, the chlamydospores are resistant to extremes of temperature. In addition, the zoospores can swim, and survive for 48 hours before loss of energy. It is recognized that it will be impossible to wipe out the *Phytophthora* pathogen; the *Phytophthora* Programme aims to reduce the risk of significant tree death (i.e. reduce inoculum levels to epidemiologically insignificant levels). Many native species can be affected by the two *Phytophora* species, including oak, sweet/horse chestnut, birch, ash and sycamore. However, if the control measures are able to keep the sporation rates low, they are less susceptible to infection. Susceptibility is variable; even within *Rhododendron* spp. it varies from the extremely prone *R. ponticum* to species that can only be infected in the lab.

Currently, *Rhododendron ponticum* is regarded as being the most 'dangerous' host, as *Phytophora* spores are produced for 12 months of the year on this species. For this reason, the *Phytophthora* Team is particularly keen on rhododendron control. Its removal can also have other benefits, improving and increasing the habitat for native species. A classic sign of *Phytophthora* infection in rhodedendron is the development of dark staining from the stalk down the midrib of the leaf. Staining may also be seen on the leaf tips, and curled, droopy leaves and necrosis on the stems may be observed. Eventually, leaf drop will occur. It should be noted, however, that these symptoms can also arise as a results of other infections. Symptoms on *Vaccinium* can include die-back on leaves, which may go to the buds, and plants may develop brown staining on the stem (not to be confused with browning from age). Various tests have been developed to help detect the presence of *Phytophora* spp. in the field. Lateral Flow Devices can be used to test for the presence of *Phytophora* spp. in samples of broken down leaves. As it cannot differentiate which of the many species is present, samples which show positive results must then be sent to the lab for further testing.

The water bait test, where plant material and gravel are wrapped in muslin then put in the water, detects swimming zoospores. The next most effective host in harbouring spore production is larch, but specimens are difficult to analyze as the sap masks test results. Helicopter flyovers are being undertaken to aim to identify infected larch areas. Brown branches are symptomatic, along with red/white/tarry tannin bleeds. The current policy is to fell on suspicion of infection. The wood can be reused, although the trees must be debarked and handled by licensed mills. Larch felling is influenced by the availability of suitable machinery, which must move around the country.

Bio security will be crucial in helping to combat this spread of *Phytophora*, so education is very important. A variety of leaflets have been produced, and the *Phytophora* Team attend events and put together displays to raise awareness. Key points to remember are:

- Keep to marked paths;
- Clean your footwear, removing soil and plant debris;
- Clean soil and plant debris from the tyres of bikes and vehicles after off-roading.

Useful links:

There are many interesting and useful *Phytophora* resources in the Fera website (www.defra.gov.uk/fera):

- Information about *Phytophora,* including the latest developments: http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/phytophthora/
- Public *Phytophora* leaflet: http://www.fera.defra.gov.uk/plants/publications/documents/phytophthoraPublicLeaflet.pdf (English) http://www.fera.defra.gov.uk/plants/publications/documents/phytophthoraPublicLeafletWelsh.pdf (Welsh)
- Information about *Phytophora ramorum* and *Phytophora kernovia*, including bilingual factsheets, distribution maps, host species and frequently asked questions: http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/phytophthora/pRamorum/ http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/phytophthora/pKernoviae/

Contact details:

Please report any suspected *Phytophthora* outbreaks or vast rhondodendron stands (including landowner details if known) to Kevin Izzard (Higher Phythophthora Project Officer):
Email: kevin.izzard@fera.gsi.gov.uk; Tel: 01792 313047

Snails & Slugs in Wales

Dr Ben Rowson (National Museum Wales)

Slugs and snails are a well-recorded group; the Conchological Society of Great Britain & Ireland has had a national recording scheme for 50 years; the Society itself has a 130 year history. They are a fairly easy group to record as they can usually be identified in the field, there are only 145-150 species, and the associated field craft is often straightforward. Spermatophores, produced during reproduction, are a useful way to identify difficult species.

The key factor which limits slug and snail distribution is moisture. Molluscs have made several independent invasions of the land, and have developed adaptations that enable them to cope with the conditions, such as the ability to form a temporary seal to the shell. Soil can also impact distribution; where specialist species can be found can provide a useful indication of the soil properties and/or underlying geology; the distribution maps of calcicole species reflects the distribution of alkaline soils. Food does not have much of an effect on the distribution of slugs and snails. Only 14% of slugs are true herbivores – other species include detritivores, carnivores and fungivores; it is currently unknown if any species are truly saproxylic (i.e. dependent on dead/decaying wood).

One of the most highly protected species of snail, *Vertigo angustior* (narrow-mouthed whorl snail), was described by John Gwyn Jeffreys, born in Swansea, from a specimen found at Singleton Park. Jeffreys was one of Britain's most

eminent 19th-century conchologists. Jeffreys also described *Spermodea lamellata*, a species indicative of ancient semi-natural woodland. Dr Rowson continued by describing this and a selection of other native woodland species:

- *Spermodea lamellata* (plated snail): Good indicator of ancient woodlands. Moisture loving species, found in Atlantic woodland, e.g. West Wales.
- *Limax cinereoniger* (ash black slug): Ancient woodland indicator, highly intolerant of disturbance.
- *Limax maximus* (leopard slug): A woodland species that is often seen in gardens and urban areas.
- *Malacolimax tenellus* (slender/tender/lemon slug): Excellent ancient woodland indicator. Poor disperser, intolerant of clear-fell. Rare. Records from Wentwood in 1930s; unclear if still present.
- *Leiostyla anglica* (English chrysalis snail): Can also be found out of woodlands if the conditions are very wet.
- *Azeca goodalli* (three-toothed moss snail) & *Cochlodina laminata* (plaited door snail): Widespread calcicoles, often associated with beech. Scarcity of Welsh records.
- *Zenobiella subrufescens*: Intolerant of disturbance. Not confined to woodland in Wales.

He then went on to discuss some introductions:

- *Hygromia cinctella* (girdled snail): First found in about 1950.
- *Boettgerilla pallens* (worm slug): Introduced in around 1972, now found almost everywhere.
- *Selenochlamys ysbryda* (ghost slug): First found in Cardiff; described by Rowson and Symondson in 2008. Likely to be a both a new species and an introduction. Appears to only eat worms. Publicity was generated and many specimens were received, some of which were actually other species, but some were verified to be this species.

If you examine a timeline from the last glaciation, it is possible to see a change in dominant species from cold tolerant eventually through to woodland tolerant slug and snail species. When woodland clearance increased, open ground species began to dominate. Winning species in the future are likely to be those increasing their range and that are tolerant to disturbance; those intolerant to such change are the species likely to be lost. Unfortunately, these include the ancient woodland specialists.

SEWBReC Update
Adam Rowe (SEWBReC)

There are currently around 1.76 million records in the SEWBReC databases; data holdings have more than doubled since 2007. 12% of this data is composed of protected and priority species – the most important for decision making. The majority of SEWBReC data holdings are post-1980, mainly between 2005 and 2009; these recent records are also of importance to decision makers. Major data contributors in the past year include Gwent Ornithological Society, Gwent Fungus Group, Gwent Wildlife Trust, Sam Bosanquet and Steve Williams. Adam gave his thanks and appreciation on behalf of SEWBReC to all those who share their records. 2010 saw SEWBReC circulate a questionnaire on data sharing amongst environmental consultants. At present, a lot of biodiversity data is locked in reports on shelves. The four Welsh Local Records Centres work together closely, and Wales is taking the lead in working with consultants to free up this data.

Data is used to screen planning lists for local authorities, produce GIS-based species alert layers for many funding partners, undertake miscellaneous biodiversity searches and respond to commercial enquiries. To date, during the financial year 2010-2011, SEWBReC have dealt with over 300 commercial enquiries, equating to around 23% of the income for the year. User satisfaction appears to be high; a survey is planned for later in the year.

During 2010, events organised by SEWBReC included the Recorders' Fora, three Biodiversity Blitz Days and a series of species identification workshops. The organisation is also aiming to broaden its reach by engaging with social media, such as Facebook (see http://www.facebook.com/pages/South-East-Wales-Biodiversity-Records-Centre/103544599683127?ref=ts). SEWBReC continue to aim to offer support to recorders to make recording

easier, by, for example, offering technical support. Events relevant to wildlife conservation and recording are advertised free of charge on provision of event details and web pages are hosted on behalf of a number of local recording groups.

National Biodiversity Network (NBN) Gateway Discussion
Adam Rowe (SEWBReC)

Please refer to *'The National Biodiversity Network (NBN) Gateway – Opportunity or Threat?'* (Appendix).

Key points from discussion

- The NBN could be a great shop window for data providers, providing a national picture of distribution, showing what records are available and where to get them from.

- There is pressure on LRCs from some organisations to upload data to the Gateway at full resolution. It is possible to restrict access once the data is uploaded; i.e. the data could be shown in general at a reduced resolution, but permission could be granted, for example for verification purposes, to download full resolution data.

- Recently, the Environment Agency approached all NBN data providers for full access for records for national licensing purposes, which led to concern by LRCs. However, they have since stated that they recognise that they cannot have access to full resolution data if they do not provide funding, and the NBN was simply seen as an efficient way of gaining access to the most data. If the joint Welsh database (currently in development) was the easiest way to get the most data, they would use that.

- When recorders share records with a Local Records Centre (LRC), they can sign a Data Exchange Agreement (DEA) to enable data to be exchanged for support and services. There is no such formalised agreement with the NBN, so they effectively get the data for free and the recorders get nothing.

- It is thought that whilst the NBN understand the value of recorders, they are too far detached to understand their needs. They are funded directly by bodies such as Defra, Natural England, Countryside Council for Wales (CCW), Scottish Natural Heritage, rather than receiving funding in exchange for services. In addition, senior staff have been seconded from these organisations to work within NBN. Funds are invested into the Gateway and development rather than recorders.

- Representatives from several local recording groups present at the forum noted that the services provided by LRCs are seen as very valuable, and they appreciate the support and services received, such as in mobilisation of data.

- Data submitted to several national organisations is uploaded to the NBN at full resolution and is accessible to all. Some noted that they would be very happy to see the resolution that this data is generally available at made much coarser.

- Legally, record ownership remains with the original recorder, even if they have chosen to pass this data on. The recorder therefore has a say in what happens to the data, whether this is agreeing that their data should be available via the NBN or withdrawing consent for their records to be used in this way. Withdrawal of data was put forward by some as one way for recorders to get the NBN to take notice that they are not happy with the NBN becoming an alternative means of data supply at the expense of the LRCs.

- An enquiry was made as to whether the NBN could buy data from LRCs, and if this could be used as an income stream to replace any financial loss due to enquirers consulting the NBN only. Clarification was given that buying data is a no-no and that charges made by LRCs are to cover administrative costs.

- The Association of Local Environmental Records Centres (ALERC) does not have a set position on how LRCs and the NBN should interact as opinion varies between member LRCs: some have uploaded vast amounts of data to the NBN, whilst others strongly oppose it and regard it as disrupting the good work of LRCs. Whilst using ALERC as a national voice could give opinion more force, this division of views makes it seem more appropriate to allow the individual LRCs their own opinion.

- The way in which consultants use the NBN and LRCs varies:
    - Some always consult the NBN first to see if any data is present. They are happy for this information to be at a coarse resolution. If data is present, they contact the Local Records Centre to purchase the detailed records. If no data is shown on the NBN, they see less of an incentive to go to the LRC.
    - Other consultancies, whilst consulting both NBN and the LRCs at times, had as part of their protocol to always request a data search from an LRC, whatever the NBN showed.
    - Consultancies are businesses, and the client is the consultant's priority. If the same resolution of data was available from the NBN as the LRC but the NBN was cheaper, they would have to go to them, even if there was less data available. Unless the service is better and cheaper, there is no benefit to a consultant in going to the LRC over the NBN. They cannot get benefits such as a DEA.
    - Standardisation in format and quality of service provided by LRCs may encourage use by consultants; it is currently very variable between LRCs.

- It should be remembered that the importance of records is supporting conservation; an inconsistent approach is potentially damaging to conservation.

- An agreement is needed to prevent LRCs and NBN fighting over the same territory, but in the current financial climate when money is tight for everyone, this can be more difficult.

Outcomes of discussion:

An agreement was reached by all present at the Gwent Recorders' Forum that they would like to engage with the NBN at a level that will not damage the business model of LRCs, whether this means the upload of coarse resolution data, access controls or backwards funding from NBN to LRCs. It was agreed that if necessary, a letter would be put together reflecting this opinion to NBN.

The Chairman closed the event by thanking the SEWBReC team for organising the Forum. He congratulated the speakers on interesting and stimulating presentations, and finished by giving thanks to the attendees for coming. Attendees were invited to join Steve Williams for a walk around the farm environs and adjoining Local Nature Reserve.

Appendix

The National Biodiversity Network (NBN) Gateway – Opportunity or Threat?

This discussion paper introduces the proposal by the NBN Gateway to provide data products and services, and the impact of this plan on the LRC business model. Whilst the paper has been produced by SEWBReC and is thus largely from an LRC-centric viewpoint; we hope the paper will promote discussion and encourage debate on the issues raised.

The NBN Gateway is a national "data warehouse" for biodiversity information. It was originally set up to collate datasets from national schemes, societies and record centres. It also provides a means of disseminating these data, as distribution maps and as data downloads. Additionally it disseminates information on designated sites and habitats. Since the NBN's inception 10 years ago, there has been a fear amongst Local Record Centres that the NBN Gateway would try to compete for pieces of work that would otherwise come to the LRCs and thus damage their business model.

In setting up SEWBReC, as in the case of other Local Records Centres across the UK, one of the key messages that we wanted to get over was that sharing data was a good thing. By making information available to us, we can provide it to the decision makers as and when they need it. The NBN Gateway is simply another way of making these datasets available to more people.

SEWBReC and other LRCs are keen to see the NBN Gateway act as a shop window for the vast quantities of data that exist within the NBN partnership, whether it is held by LRCs, national schemes and societies or by the national Biological Records Centre. This function could be performed by the NBN Gateway allowing users to see coarse resolution data and then signposting them to places that more detail can be obtained. However, increasingly NBN Gateway tools are being developed to deliver the type of tailored data products that LRCs already deliver.

One area of work that the NBN Gateway cannot undertake is to provide support services to local recorders, to build relationships and trust with such recorders and to computerise and bring into usage large quantities of their data. These are key work areas of LRCs, however in order to pay for this important work, LRCs need to generate income by selling their services to public and private sector users. The NBN Trust (the body behind the NBN Gateway and the promotion of the NBN concept), like everyone else at the moment, is concerned about cuts to its revenue from public sector sources and is increasingly looking at providing tailored data products to suit large organisations. It sees the NBN Gateway as the best way to deliver data direct to organisations such as Environment Agency and Forestry Commission.

The LRCs in Wales are two years into a three year agreement with the Environment Agency, for which we provide an alert layer – essentially a snapshot of our data holdings for their ecologists to check against in their various licensing tasks. A similar agreement was close to being set up with the Forestry Commission Wales around 18 months ago, until NBN staff began independent discussions about providing similar data services via the NBN Gateway. The NBN's approach to FCW has apparently derailed the hopes of LRCs supplying this data, thereby cutting off potential income to LRCs.

NBN staff are of the opinion that if the NBN Gateway handles the delivery of data on our behalf, LRCs can concentrate on the other things that LRCs have to do – i.e. supporting the local recording community, validating and verifying records, and providing these records to the Gateway. In principle, we have no objection to this, except that we already have a working mechanism for delivering data to our users, and

if we lose that close connection, they may feel they no longer need to provide us with our current level of funding. A drop in funds would mean less staff to do the support work, the verification work etc.

Over the years the Welsh LRCs have digitised large quantities of data (over 1 million records) on behalf of CCW, and our agreement with CCW is such that all of these records have to be provided to the NBN Gateway. CCW are also keen for us to get as many of our other datasets as possible onto the Gateway. To that end, we have been in talks with a few of our data providers and we have agreements in place to get some of these uploaded in due course. However, at the SEWBReC AGM the shift in policy of Environment Agency was considered cause for concern, and in the event that these sources of funding cease to be available to us, it was suggested that any non-CCW data should be removed from the Gateway.

Discussion Points

- *Do you want your data uploaded to the NBN Gateway? Or should SEWBReC withhold/remove all non-CCW data from the NBN Gateway?*
- *Can we solve the issue by providing the NBN Gateway with (non-CCW) records at a coarser resolution (i.e. records with a less precise grid reference)? These records will still contribute to the UK distribution maps, but be of limited value when undertaking a site assessment at the local level.*

SEWBReC
December 2010